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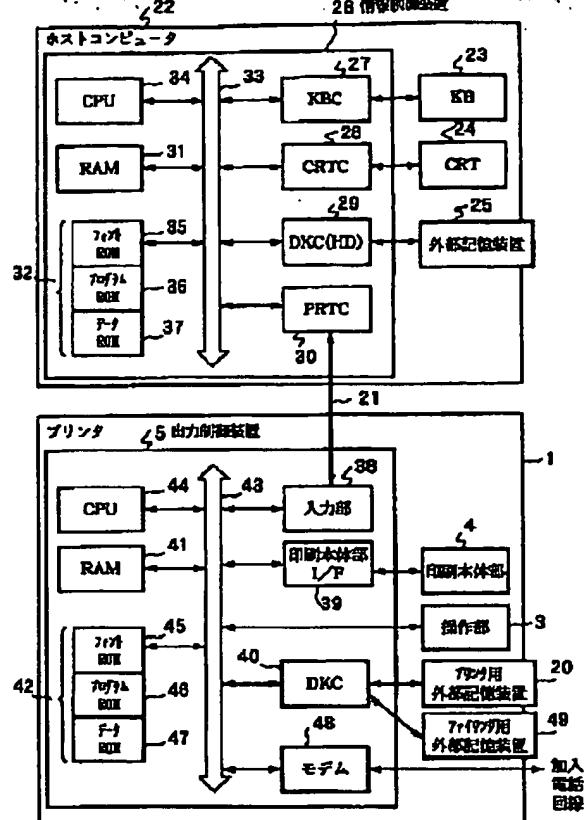
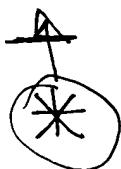
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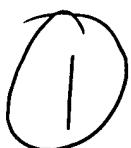
TITLE : OUTPUT CONTROLLER AND ITS CONTROL METHOD



ABSTRACT : PROBLEM TO BE SOLVED: To enable a user to easily set an output destination and its detailed settings by providing an output destination selecting means which selects a desired output destination out of output destinations registered in a registration means at the time of data output.

SOLUTION: A registered output destination list is read out of an external storage device 25 and according to the read output-destination list, an output screen is displayed on a CRT 24. Then the user is prompted to select an output destination on the displayed output setting screen through a keyboard 23 or with a pointing device. Once the choice of the output destination by the user is confirmed, the selected item is acquired from the output destination list. Then, information on the selected output destination is read out of saved output setting information, which is initialized. Data are transmitted to the set output destination through a printer (hybrid machine) 1.

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CLAIMS

[Claim(s)]

[Claim 1] A registration means to be the power control device equipped with a selection means to choose a desired output means as an output destination change out of two or more output means, and to register one or more output means as an output destination change at the time of data printing, The power control device characterized by having an output destination change selection means to choose at least one desired output destination change from the output destination change registered into said registration means at the time of data output, and an output destination change setting means to set up so that data may be transmitted to the output destination change chosen by said output destination change selection means.

[Claim 2] Each of two or more of said output means is a power control device according to claim 1 characterized by including either of the data communication means through a printer, facsimile, filing, and a modem and infrared communication equipment.

[Claim 3] When said output means is a printer further, said registration means Register a setup of a feed means or a delivery means, and when said output means is facsimile Register the name of a transmission place, an addresser's name, and a facsimile number, and when said output means is filing In the case of a data communication means by which register a permanent-file name and preservation format and said output means minds a modem and infrared communication equipment, it is the power control device according to claim 2 characterized by registering the address.

[Claim 4] Said registration means is a power control device given in either of claims 1-3 characterized by the ability to register two or more output destination changes into a desired group collectively.

[Claim 5] Said output destination change setting means is a power control device given in either of claims 1-4 characterized by setting up so that data may be transmitted to a vacant output means, when the selected output destination change includes two or more output means.

[Claim 6] Said output destination change setting means is a power control device given in either of claims 1-5 characterized by setting up so that data may be transmitted to all output means when the selected output destination change includes two or more output means.

[Claim 7] The registration process which is the control approach of the power control device equipped with a selection means to choose a desired output means as an output destination change out of two or more output means, and registers one or more output means as an output destination change at the time of data printing, The control approach characterized by having the output destination change selection process which chooses at least one desired output destination change from the output destination change registered according to said registration process at the time of data output, and the output destination change setting process set up so that data may be transmitted to the output destination change chosen by said output destination change selection process.

[Claim 8] Each of two or more of said output means is the control approach according to claim 7 characterized by including either of the data communication means through a printer, facsimile, filing, and a modem and infrared communication equipment.

[Claim 9] When said output means is a printer further, said registration process Register a setup of a feed means or a delivery means, and when said output means is facsimile Register the name of a transmission place, an addresser's name, and a facsimile number, and when said output means is filing In the case of a data communication means by which register a permanent-file name and preservation format and said output means minds a modem and infrared communication equipment, it is the control approach according to claim 8 characterized by registering the address.

[Claim 10] Said registration process is the control approach given in either of claims 7-9 characterized by the ability to register two or more output destination changes into a desired group collectively.

[Claim 11] Said output destination change setting process is the control approach given in either of claims 7-10 characterized by setting up so that data may be transmitted to a vacant output means, when the selected output destination change includes two or more output means.

[Claim 12] Said output destination change setting process is the control approach given in either of claims 7-11 characterized by setting up so that data may be transmitted to all output means when the selected output destination change includes two or more output means.

[Claim 13] It is the computer-readable storage which stores the program which controls the power control device equipped with a selection means to choose a desired output means as an output destination change out of two or more output means at the time of data printing. A registration step for said program to register one or more output means as an output destination change, The

output destination change selection step for choosing at least one desired output destination change from the output destination change registered at said registration step at the time of data output, The storage characterized by having the output destination change setting step set up so that data may be transmitted to the output destination change chosen by said output destination change selection step.

[Claim 14] Each of two or more of said output means is a storage according to claim 13 characterized by including either of the data communication means through a printer, facsimile, filing, and a modem and infrared communication equipment.

[Claim 15] When said output means is a printer further, said registration step Register a setup of a feed means or a delivery means, and when said output means is facsimile Register the name of a transmission place, an addresser's name, and a facsimile number, and when said output means is filing In the case of a data communication means by which register a permanent-file name and preservation format and said output means minds a modem and infrared communication equipment, it is the storage according to claim 14 characterized by registering the address.

[Claim 16] Said registration step is a storage given in either of claims 13-15 characterized by the ability to register two or more output destination changes into a desired group collectively.

[Claim 17] Said output destination change setting step is a storage given in either of claims 13-16 characterized by setting up so that data may be transmitted to a vacant output means, when the selected output destination change includes two or more output means.

[Claim 18] Said output destination change setting step is a storage given in either of claims 13-17 characterized by setting up so that data may be transmitted to all output means when the selected output destination change includes two or more output means.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the power control device which controls an output setup of the output unit which has two or more more detailed output means, and its control approach about a power control device and its control approach.

[0002]

[Description of the Prior Art] In recent years, a host computer (power control device) and a printer (output unit) are connected through the interface of a Centronics interface etc., research and development in the information processing system which processes information is done briskly, and it has been put in practical use.

[0003] In this kind of information processing system, when using a laser beam printer, for example as a printer, if printed information is inputted into a laser beam printer from a host computer, will analyze printed information, subsequently to bit map data, will develop as output data, and a laser beam printer will make a photoconductor drum carry out scan exposure of the laser beam modulated based on bit map data, and will perform image recording.

[0004] Moreover, one or more are incorporated, the program (application) which operates printing by the printer as a host computer mediates printing from these applications to a specific printer to coincidence, and the program (printer driver) to which more detailed printing control is carried out is also usually incorporated.

[0005] Moreover, the compound machine (MFT:Multiple Function Peripheral) connected and used for a host computer is put in practical use with multi-functionalization of a printer and a copying machine. Generally, in addition to the print facility, these have the facsimile function, the filing function, etc., and can be used from the connected host computer like a print facility.

[0006] Furthermore, in the above information processing system, it has the control language which can choose and use the above various functions from the host computer connected to the compound machine, and can output carrying out a printout from the paper output tray of a compound machine, transmitting to the facsimile receiver of a remote place, or filing the data in a host computer in the storage connected to the compound machine etc. to the output destination change of arbitration by sending a suitable control code with data data from a host computer. Moreover, in such an environment, a user can also choose an output destination change according to the contents of data.

[0007]

[Problem(s) to be Solved by the Invention] However, in the case of the conventional information processing system, a user needs to choose a suitable output destination change each time according to the data which it is going to output. Furthermore, a detailed setup suitable for the selected output destination change must be performed. For example, in a delivery means, a feed means, and facsimile transmission, it is necessary to set [in the case of a printout] up a different item for every function outputted to the condition of a permanent-file name a phase hand's telephone number, and in filing, and each output machine -- since the actuation performed whenever a setting item increases and a user outputs so that a core is highly efficient tends to become complicated -- an operation mistake -- a lifting -- easy -- it has become.

[0008] This invention is made in view of such a trouble, and it aims at providing with information processing system the power control device with which a user can set up an output destination change and its detail setup easily, its control approach, the medium which recorded the output-control program, and a list.

[0009]

[Means for Solving the Problem] In order to attain the purpose which conquers the above-mentioned technical problem, the power control device by this invention has the following configurations. Namely, [0010] A registration means to be the power control device equipped with a selection means to choose a desired output means as an output destination change out of two or more output means, and to register one or more output means as an output destination change at the time of data printing, It is characterized by having an output destination change selection means to choose at least one desired output destination change from the output destination change registered into the registration means at the time of data output, and an output destination change setting means to set up so that data may be transmitted to the output destination change chosen by the output destination change selection means.

[0011] Furthermore, in order to attain the purpose which conquers the above-mentioned technical problem, the control approach of the power control device by this invention has the following configurations. Namely, [0012] The registration process which is the control approach of the power control device equipped with a selection means to choose a desired output means as an output destination change out of two or more output means, and registers one or more output means as an output destination change at

the time of data printing, It is characterized by having the output destination change selection process which chooses at least one desired output destination change from the output destination change registered according to the registration process at the time of data output, and the output destination change setting process set up so that data may be transmitted to the output destination change chosen by the output destination change selection process.

[0013] Furthermore, in order to attain the purpose which conquers the above-mentioned technical problem, the storage by this invention has the following configurations. Namely, [0014] It is the computer-readable storage which stores the program which controls the power control device equipped with a selection means to choose a desired output means as an output destination change out of two or more output means at the time of data printing. The registration step into which said program registers one or more output means as an output destination change, It is characterized by having the output destination change selection step which chooses at least one desired output destination change from the output destination change registered at the registration step at the time of data output, and the output destination change setting step set up so that data may be transmitted to the output destination change chosen by the output destination change selection step.

[0015]

[Embodiment of the Invention]

The gestalt of operation of this invention is explained based on a drawing below [the 1st operation gestalt].

[0016] A laser beam printer can be mentioned as an example of the output unit which constitutes the information processing system concerning this invention, and has facsimile transmitter voice and a filing function. Drawing 1 is the sectional side elevation showing the internal structure of the laser beam printer applied to this operation gestalt.

[0017] The main configurations of the laser beam printer 1 contain the control panel 3 which has the switch section prepared in the top face of the body 2 of equipment, an LED display, etc., the printing body section 4 which performs predetermined printing actuation, and the print control unit 5 which analyzes alphabetic data and the control data which are inputted and controls printing actuation of the printing body section 4.

[0018] The sheet paper cassette from which the main configurations of the printing body section 4 became the medium tray which contains the predetermined record form (cut sheet) which is a record medium, and the stage of the number of arbitration, or the feed means 7 equipped with the both, The electrostatic drum 9 which imprints a toner image on the recording paper supplied through the conveyance roller 8 of the number of arbitration, The development counter 11 which contained the toner of a predetermined color to the electrostatic drum 9 as the optical system 10 which irradiates a laser beam, and a color material, and was arranged in the perimeter of the electrostatic drum 9, The fixing assembly 12 to which the toner image developed by the development counter 11 is fixed, and the delivery unit 14 which discharges the data printed by the detail paper to the equipment exterior through the delivery roller 13 are included.

[0019] Moreover, optical system 10 is equipped with the semiconductor laser 15 which injects the laser beam of predetermined wavelength, the laser driver 17 which drives semiconductor laser 15, the rotating polygon 18, and the reflecting mirror 19 which is made to reflect the laser beam which carries out ON light through a rotating polygon 18, and supplies this laser beam on the electrostatic drum 9.

[0020] The laser beam printer 1 which has such a configuration creates a character pattern, a form pattern, etc. based on these various data, and forms an image in a record form while it memorizes print data, form data, or macro instruction etc. which are supplied from the host computer 22 (drawing 2) as a power control device, such as a character code. That is, if a video signal inputs into a laser driver 17 from a print control unit 5, a laser beam will be injected from semiconductor laser 15. Turning on and off of a laser beam changes according to a video signal. A laser beam is shaken at a longitudinal direction by the rotating polygon 18, scans the electrostatic drum 9 top, and makes electrostatic latent images, such as a character pattern, form on the electrostatic drum 9. A development counter 11 develops this electrostatic latent image, i.e., a toner is made to adhere and it makes a toner image form on the electrostatic drum 9. A toner image is imprinted by the recording paper to which paper was fed from the feed means 7, and a fixing assembly 12 is fixed to it. The recording paper is discharged by the discharge section 14 through the delivery roller 13 after that.

[0021] Drawing 2 is the block diagram showing the whole information-processing-system configuration concerning this invention, connection with the external storage 20 for printers is possible for the laser beam printer 1, and it connects the laser beam printer 1 to a host computer (power control device) 22 through the interface cable 21 which manages predetermined bidirection interface actuation. In addition, although the gestalt of this operation gestalt shows the case where the laser beam printer (compound machine) 1 and host KOMBYUTA 22 are connected through the interface cable 21, it is applicable similarly about the information processing system connected through predetermined communication networks, such as LAN (local area network).

[0022] The host computer 22 is equipped with the external storage 25, such as a flexible disk with which a PUTO program, a various application program, font data, the user file, the edit file, etc. were remembered to be the keyboard 23 for an operator to input the data of arbitration, and the display (CRT) 24 which performs the display of the inputted data etc., and a hard disk, and the information control unit 26.

[0023] The keyboard controller 27 which controls the input data the information control device 26 was instructed to be by key input data and the pointing device (un-illustrating) from a keyboard 23 (KBC), CRT controller (CRTC) 28 which controls CRT24, and the disk controller 29 which controls access with external storage 25 (DKC), The printer controller 30 which performs communications control processing with the laser beam printer 1 (PRTC), It has RAM31 which has a function as a work area etc., ROM32 which stores a predetermined printing control program etc., CPU34 which manages control of an information-processor 26 all affair, and the system bus 33 which connects each above-mentioned component.

[0024] ROM 32 has ROM35 for fonts which memorizes further the font data used at the time of processing of data, ROM36 for a program which stores a predetermined data-processing program and a printing control program, and ROM 37 for data which memorizes the various data used when performing the above-mentioned data processing, and CPU 34 performs data processing in which a graphic form, an image, an alphabetic character, the table (a spreadsheet is included), etc. were intermingled according to the above-mentioned data-processing program. At this time, RAM31 is used as a work area. CPU34 performs expansion (rasterize) processing of the outline font to the indicative-data field established in RAM31, and carries out the printout of the data possible [on CRT24] (WYSIWYG:What You See Is What You Get) and displayed on CRT24 as it is. Moreover, CPU34 opens various windows registered based on the command data directed with the pointing device etc., and performs various data processing. [0025] The input section 38 into which, as for a power control device 5, output data are inputted from a host computer 22 on the other hand, The printing body section interface 39 which manages interface actuation between the printing body sections 4, The disk controller 40 which controls access with the external storage 20 for printers, and the external storage 49 for filing (DKC), RAM41 for printers which has an output-data expansion field, an environmental data storage field, NVRAM, etc., Predetermined data are equipped with ROM42 for printers memorized beforehand, the modem 48 linked to a telephone line, CPU44 for printers which manages control of the power control device 5 whole, and the system bus 43 which connects each component.

[0026] ROM42 for printers is equipped with ROM45 for fonts which memorizes the font data further used when generating the output data to the printing body section 4, ROM46 for a program which stores a predetermined control program, and ROM47 for data which memorizes the various data used with a host computer 22. CPU44 for printers outputs the picture signal as output data to the printing body section 4 connected through the printing body section interface 39. Moreover, through the input section 38, since the two-way communication of a host computer 22 and the laser beam printer 1 is possible, CPU34 can notify the print data of the laser beam printer 1 to a host computer 22. Furthermore, RAM41 for printers can extend memory space by being extended through an extension port (un-illustrating).

[0027] Form data, such as an emulation program which interprets font data and a different printer control language of a language system, are memorized by the external storage 20 for printers.

[0028] In addition, you may make it the configuration which can connect two or more external storage 20 for printers which stored an option font card and two or more emulation programs in addition to the built-in font, and the external storage 20 for these printers has NVRAM, and you may constitute so that the printer setting data from a control panel 3 may be memorized.

[0029] When facsimile is directed to the output destination change of the print data sent from a host computer 22, it connects with a phase hand's facsimile receiver through a telephone line, and a modem 48 is used in order to transmit the developed output data.

[0030] When filing is directed to the output destination change of the output data sent from a host computer 22, since output data are saved, the external storage 49 for filing is used.

[0031] Drawing 3 shows an example of the memory map 69 in the condition that the predetermined output-control program stored in ROM32 was loaded to RAM31, and activation of it was attained. A memory map 69 has the basic I/O program storage region 60, the OS storage region 61, the output setting control program storage region 62, the output destination change registration control program storage region 63, the associated data storage region 64, and a work area 65.

[0032] The output-control program and associated data which were recorded on media, such as a flexible disk, are once stored in the hard disk (install), and when operating an output-control program, you may make it load to RAM31 from a hard disk, although this operation gestalt showed the example which the output-control program and associated data which were stored in ROM32 are loaded [example] to RAM31, and performs them.

[0033] Moreover, the media which record an output-control program may be CD-ROM, IC memory card, etc. in addition to a flexible disk.

[0034] Drawing 4 is an example of the memory map 59 at the time of using a flexible disk as an example of the external storage 25 connected to a host computer 22. The memory map 59 has the volume information storage region 50, the directory information **** field 51, the program storage area 52 that stores predetermined output-control programs (for example, an output setting control program, an output destination change registration control program, etc.), and the data storage area 53 which memorizes the associated data (for example, output destination change candidate information, default output setting information, the resource for a display (the object for printers, the object for facsimile transmission, for filing, etc.), etc.) used in the above-mentioned output-control program.

[0035] Drawing 5 shows the case where a flexible disk is used as an example of the external storage 25 connected to a host computer 22. By making the flexible disk drive which connected with the host computer 22 the flexible disk of the memory map illustrated to drawing 4 read, an output-control program is supplied to a host computer 22.

[0036] With this operation gestalt, the list of output destination changes is registered beforehand (following and output destination change registration control processing). When actually outputting data, a desired output destination change is chosen out of the output destination change list registered beforehand, and an output destination change is set up (following and output setting control processing).

[0037] Drawing 6 is the flow chart of output destination change registration control processing. This processing is performed after a program, data, etc. which are related by actuation of a keyboard 23 or a pointing device (un-illustrating) are loaded to RAM31.

[0038] First, ***** assistant information as shown in drawing 7 at step S10 is read from external storage 25. Drawing 7 illustrates the list 70 of the ***** assistant information memorized by the external storage 25 grade, and the available output

means name (for example, a printer, facsimile transmission, filing) is memorized by each item 71 of a list 70 from the host computer 22 by the output-control program among the output means which the laser beam printer 1 supports.

[0039] Next, it progresses to step S11 and the output destination change candidate information read at step S10 is displayed on CRT24 of a host computer 22.

[0040] Drawing 8 shows an example of the GUI (Graphical User Interface) screen 80 displayed on CRT24 of a host computer 22 at the time of step S11. In the case of drawing 8, a user can choose now the carbon button (the printer carbon button 81, the facsimile transmitting carbon button 82, filing carbon button 83) in which the output means displayed on the screen is shown by actuation of a keyboard 23 or a pointing device (un-illustrating).

[0041] Next, it judges whether the output means was chosen from the output destination change candidate at step S12. If it is judged that the output means is chosen, it will progress to step S13 and will judge whether an output means is a printer. When an output means is not a printer, it progresses to step S14 and judges whether an output means is facsimile. If an output means is judged not to be facsimile at step S14, it will progress to step S15 and will judge whether an output means is filing. If an output means is judged not to be filing at step S15, it will return to step S12 and will wait for a user's selection.

[0042] When an output means is judged to be a printer at step S13, the default output setting information for printers is read from external storage 25 (step S16), and the setting screen for printers (un-illustrating) is displayed on CRT24 based on this (step S17). In case a printout is performed, it enables it to set a required feed means and a required delivery means, an output destination change, etc. as a detail on this setting screen. For example, if the printer 1 is equipped with the sorter, it will set up to which bottle paper is delivered. If the destination name is beforehand assigned to each bottle of a sorter, it comes to be able to perform bottle assignment of a sorter only in a destination name like a mail box at this time. For example, if the object for the "administration divisions" and the 2nd step of bottle are set up for the "procurement and supply divisions" for the 1st step of bottle, a delivery place can be concretely expressed as not "the 1st step" and the "2nd step" but the "administration division", and the "procurement and supply division", and a delivery place can be specified easily.

[0043] On the other hand, when an output means is judged to be facsimile at step S14, the default output setting information for facsimile transmission is read from external storage 25 (step S18), and the setting screen for facsimile transmission (un-illustrating) is displayed on CRT24 based on this (step S19). On this setting screen, in case facsimile transmission is performed, it is good to enable it to set the telephone number, an addresser name, etc. of a required transmission place as a detail. For example, if the list of the telephone number or output means setup is created for every name of a transmission place, facsimile transmission can be performed only by choosing a transmission place.

[0044] On the other hand, when an output means is judged to be filing at step S15, the default output setting information for filing is read from external storage 25 (step S20), and the setting screen for filing (un-illustrating) is displayed on CRT24 based on this (step S21). In case it files, it enables it to set a required permanent-file name, preservation format, etc. as a detail on this setting screen. For example, if the preservation place etc. is set up for every file name, the actuation at the time of updating data frequently and saving them will become easy. Moreover, if it is the environment which is delivering data using the filing function and the specific folder which the identifier of the partner who delivers data, and the section signature attached will be set up, data can be delivered easily.

[0045] In addition, a specific destination name (for example, logical names which output data, such as a previous section signature and a recipient name) may be set as arbitration as a name of an output means. If it does in this way, an output means can be concealed, and data can be outputted to the output means set up beforehand only by choosing an output destination change. That is, since the data output to each output destination change is supposed by the destination name and can **** a detail setup in connection with an output means, data output can be performed, without being conscious of an output means. For example, if facsimile transmission to the "Osaka branch" and the Nagoya branch is set up for facsimile transmission to the Osaka branch with the "Nagoya branch", facsimile transmission of the data will be automatically carried out only by choosing the "Osaka branch" and the "Nagoya branch" at the Osaka branch or the Nagoya branch. If it does in this way, data can be outputted even if it does not take into consideration a printer, facsimile, and the output means of filing.

[0046] At step S22, if user actuation in each setting screen is supervised and a setup is completed, it will progress to step S23 and the output setting information on a configuration as shown in drawing 9 based on a setup of a user will be created. The common setting information storage region 91 which drawing 9 shows the list 90 of the output setting information created at step 23, and memorizes a common setting item in each output destination change, The setting information storage field 92 for printers which memorizes the setting item about a printer output, The setting information storage field 93 for facsimile transmission which memorizes the setting item about facsimile transmission, and the setting information storage field 94 for filing which memorizes the setting item about a filing output are included.

[0047] Next, it progresses to step S24 and the output setting information created at step S23 is saved at external storage 25.

[0048] Next, the output destination change and output means which were progressed and set to step S25, and output setting information are registered into the output destination change list 100 as shown in drawing 10. Drawing 10 shows the example of the output destination change list 100 used by the output-control program for outputting data, and has the destination name storage region 101 which memorizes the destination name of an output destination change, the output means storage region 102 which memorizes the classification of an output means, and the output setting information storage region 103 which memorizes the output setting information set as the output means. For example, at the 1st line of the list 100 of drawing 10, "output setting information #1" is memorized by the "administration division" at a destination name, and it is memorized by the output means at a "printer" and output setting information. The output setting information on drawing 10 is constituted like drawing 9.

[0049] At step S26, it checks whether there is any addition on the output destination change list 100. When there is an addition,

when there are not return and an addition, this output destination change registration control processing is ended to step S12. [0050] Next, the procedure at the time of actually outputting is explained. Drawing 11 shows the flow chart which shows an output procedure. A host computer 22 will transmit data to the output destination change which set up the output destination change of data according to the procedure mentioned later (step S112), and was set up through the printer (compound machine) 1, if an output destination change is chosen by the user (step S111) (step S113).

[0051] Drawing 12 is a flow chart which shows the procedure of the output setting control processing performed at step S12.

[0052] This processing is performed after loading a program, data, etc. which operate a keyboard 23 or a pointing device (un-illustrating), and are related before output initiation to RAM31.

[0053] At step S1, the registered output destination change list 100 as shown in drawing 10 is read from external storage 25. However, when output destination change registration control processing is not performed in advance, since the output destination change list 100 is not ****(ed), read-out will not be performed, but it will perform a setup as usual, or will create the output destination change list 100. Moreover, after carrying out a setup as usual, you may enable it to add the set-up conditions to the output destination change list 100.

[0054] It progresses to step S2 and an output setting screen is displayed on CRT24 based on the output destination change list read at step S1. Drawing 13 is drawing which enumerated the output destination change lists 100 which show an example of the GUI (Graphical User Interface) screen 120 of an output setup displayed on CRT24, and were registered at step S2.

[0055] The initial state of CRT24 displayed by step S2 is good to change into the condition that the predetermined item (for example, the first item) of the output destination change list 100 is chosen (step S3).

[0056] It progresses to step S4 and a user is informed that an output destination change is chosen from the output setting screen 120 displayed on CRT24 with a keyboard 23 or a pointing device (un-illustrating). For example, it is good to enable it to choose an output destination change by a user's clicking the output destination change carbon button 121 of arbitration with a pointing device (un-illustrating), or choosing the output destination change carbon button 121 by the keyboard 23 in the case of the GUI screen shown in drawing 13.

[0057] If selection of the output destination change by the user is checked at step S5, it progresses to step S6 and the item chosen from the output destination change list 100 is acquired. Then, the information on the selected output destination change is read from the output setting information saved in the output setting information storage region 103 (step S7), and the output setting information on a configuration of being shown in drawing 10 is initialized (step S8). Then, it progresses to step S113.

[0058] Thus, if the output destination change list is created beforehand, when outputting data, selection of an output destination change becomes easy.

[0059] In addition, this invention is not limited to the gestalt of operation mentioned above. Below, other operation gestalten are explained.

[0060] Although the gestalt of the [operation gestalt of ** 2nd] above-mentioned implementation has explained the gestalt by which a host computer controls, you may control except a host computer.

[0061] For example, the output-control program and associated data of a gestalt of the above-mentioned implementation are mounted in MFT, and the setting screen displayed on CRT24 with the gestalt of the above-mentioned implementation is displayed on the screen established in the operation panel of MFT, and it enables it to operate the setting screen displayed by the actuation key prepared at this operation panel. Moreover, the created output destination change list is saved at the nonvolatile memory built in MFT. Thus, if constituted, an output means is controllable also by MFT.

[0062] Although it was going to output to each output means with [the 3rd operation gestalt] and the gestalt of the above-mentioned operation using the output means formed in single MFT, it is applicable also by the system which consists of two or more MFT connected through networks, such as LAN, or the output unit and host computer of a single function.

[0063] For example, the processing which detects each [of two or more output units] output means when it can use through a network from a host computer, and output capacity is prepared, it considers as the output destination change candidate information that the detection result was shown in drawing 7, and the output means detected on the ***** assistant selection screen displayed at step S11 of output destination change registration control processing of drawing 6 are enumerated. Then, a detail setup corresponding to the output capacity of the selected output means is performed, and it registers with an output destination change list.

[0064] Thus, with constituting so that two or more output units can be used integrative from a host computer, not only various functions MFT but two or more output units in a system can be used effectively.

[0065] Although an output destination change setup was created by specifying clearly the output means of the output unit connected into a system, each output means is concealed and you may make it specify only the classes (a printer, facsimile transmission, etc.) of output means with [the 4th operation gestalt] and the gestalt of the above-mentioned operation.

[0066] For example, in a system like the 3rd operation gestalt, when there are available printers 1-5, in output destination change registration control processing, it registers by making printers 1-5 into one group, and only let the group name be a "printer." When a "printer" is chosen by output setting control processing, the printer which is vacant out of printers 1-5 is chosen, and data output is performed.

[0067] Moreover, since it is the purpose that data are outputted to a phase hand's facsimile receiver when there are two or more facsimile sending sets used for transmission, there is no need of limiting a facsimile sending set. For example, in a system like the 3rd operation gestalt, when there are available facsimile sending sets 1-5, in output destination change registration control processing, it registers by making the facsimile sending sets 1-5 into one group, and only let the group name be "facsimile." When "facsimile" is chosen by output setting control processing, the facsimile sending set which is vacant out of the facsimile

sending sets 1-5 is chosen, and data output is performed. Thus, it becomes possible to determine dynamically the output unit used for transmission.

[0068] While being able to use effectively two or more output units in a system with constituting as mentioned above, an output unit of the same kind can be used properly efficiently.

[0069] Although it set up for every output means and data were outputted with [the 5th operation gestalt] and the gestalt of the above-mentioned operation, two or more output means are collectively registered into one group, and you may enable it to output from all the output destination changes in a group in the case of data output. By one destination name, grouping of two or more output means is carried out, they are registered, and it enables it to choose by output setting control processing in which this was explained using drawing 12, in output destination change registration control processing in which it explained using drawing 6, at this time.

[0070] Or at the time of output setting control processing in which it explained using drawing 12, two or more output destination changes are chosen, and data may be made to be outputted from all the selected output means.

[0071] Thus, the same data can be made to output to coincidence from the output equipment of different media with constituting. That is, it is sufficient, and the thing made to output to the printer of a location connected in networks, such as LAN, of being as saving at a filling system at hand and share-izing **** [, and] can carry out now with an output once, and the time and effort which outputs the same data for every Media of a phase hand can be saved. [sending to the facsimile receiver of a remote place through a public line]

[0072] [-- operation gestalt [of ** a 6th]] -- although one kind of output means was registered into one output destination change, you may enable it to register the output means of a different class with the gestalt of the above-mentioned operation again

[0073] For example, the output means of a different class is registered as one group by output destination change registration control processing in which it explained using drawing 6. In case data are outputted, the output means included in the output destination change specified by output setting control processing in which it explained using drawing 12 is extracted from an output destination change list, and a vacant output means is used preferentially.

[0074] Thus, since the output unit of an usable condition can be chosen automatically and can be outputted with constituting when there are two or more output units, the output unit of a different class can be used efficiently.

[0075] For example, if it is an environment with the facsimile connected to the printer connected to the phase hand through the network, and the public line, a printer will use it and the telephone line is busy to facsimile, automatic selection can be made without a break in of a user to a printer, and the purpose of "sending data to a phase hand" can be attained easily.

[0076] Although the printer ability supported by general MFT, the facsimile function, and the filing function were mentioned as an output means with [the 7th operation gestalt] and the gestalt of the above-mentioned operation, if it is a means (output means) to copy data to somewhere else, it is applicable to all. Moreover, since it is not limited to the gestalt of the path to carry or the data outputted, you may be the ftp service which was the data communication using a modem or infrared communication equipment, or minded the Internet.

[0077]

[Other operation gestalten] In addition, even if it applies this invention to the system which consists of two or more devices (for example, a host computer, an interface device, a reader, a printer, etc.), it may be applied to the equipments (for example, a copying machine, facsimile apparatus, etc.) which consist of one device.

[0078] Moreover, it cannot be overemphasized by the purpose of this invention supplying the storage which recorded the program code of the software which realizes the function of the operation gestalt mentioned above to a system or equipment, and carrying out read-out activation of the program code with which the computer (or CPU and MPU) of the system or equipment was stored in the storage that it is attained.

[0079] In this case, the function of the operation gestalt which the program code itself read from the storage mentioned above will be realized, and the storage which memorized that program code will constitute this invention.

[0080] As a storage for supplying a program code, a floppy disk, a hard disk, an optical disk, a magneto-optic disk, CD-ROM, CD-R, a magnetic tape, the memory card of a non-volatile, ROM, etc. can be used, for example.

[0081] Moreover, it cannot be overemphasized that it is contained also when the function of the operation gestalt which performed a part or all of processing that OS (operating system) which is working on a computer is actual, based on directions of the program code, and the function of the operation gestalt mentioned above by performing the program code which the computer read is not only realized, but was mentioned above by the processing is realized.

[0082] Furthermore, after the program code read from a storage is written in the memory with which the functional expansion unit connected to the functional add-in board inserted in the computer or a computer is equipped, it cannot be overemphasized that it is contained also when the function of the operation gestalt which performed a part or all of processing that CPU with which the functional add-in board and functional expansion unit are equipped based on directions of the program code is actual, and mentioned above by the processing is realized.

[0083]

[Effect of the Invention] Since the output destination change is beforehand registered with a detailed setup according to this invention as mentioned above, at the time of data output, if an output destination change is chosen from while being registered, data will be outputted automatically, and the time and effort which carries out a detailed setup of an output destination change can be saved.

[0084] Moreover, while being able to use even for control within the information processing system which has two or more

output units from this invention and MFT independent control and being able to use effectively two or more output units in a system, an output unit of the same kind can be used properly efficiently.

[0085] Moreover, if this invention is used, the output equipment of different media can be made to carry out the multiple address output of the same data. It can carry now once with an output that it is as to save at a filling system at hand and to share-ize *** [, and], it can save the time and effort which outputs the same data to a phase hand numbers of [in all] times, and is effective. making it output to the printer of a location connected in networks, such as LAN,] [sending to the facsimile receiver of a remote place through a public line]

[0086] Moreover, since the output unit of an usable condition can be chosen automatically and can be outputted even when the phase hand who receives data has two or more output units, if this invention is used, the output unit of an efficiently different class can be used.

[0087] Moreover, if it is the environment which will be equipped with the facsimile connected to the printer to which the phase hand was connected through the network, and the public line if this invention is used, a printer will use it and the telephone line is busy to facsimile, automatic selection can be made without a break in of a user to a printer, the purpose of "sending data to a phase hand" can be attained easily, and it is more effective.

[0088] Moreover, if this invention is a means (output means) to copy data to somewhere else, it is applicable to all.

[Translation done.]

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TECHNICAL FIELD

[Field of the Invention] This invention relates to the power control device which controls an output setup of the output unit which has two or more more detailed output means, and its control approach about a power control device and its control approach.

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PRIOR ART

[Description of the Prior Art] In recent years, a host computer (power control device) and a printer (output unit) are connected through the interface of a Centronics interface etc., research and development in the information processing system which processes information is done briskly, and it has been put in practical use.

[0003] In this kind of information processing system, when using a laser beam printer, for example as a printer, if printed information is inputted into a laser beam printer from a host computer, will analyze printed information, subsequently to bit map data, will develop as output data, and a laser beam printer will make a photoconductor drum carry out scan exposure of the laser beam modulated based on bit map data, and will perform image recording.

[0004] Moreover, one or more are incorporated, the program (application) which operates printing by the printer as a host computer mediates printing from these applications to a specific printer to coincidence, and the program (printer driver) to which more detailed printing control is carried out is also usually incorporated.

[0005] Moreover, the compound machine (MFT:Multiple Function Peripheral) connected and used for a host computer is put in practical use with multi-functionalization of a printer and a copying machine. Generally, in addition to the print facility, these have the facsimile function, the filing function, etc., and can be used from the connected host computer like a print facility.

[0006] Furthermore, in the above information processing system, it has the control language which can choose and use the above various functions from the host computer connected to the compound machine, and can output carrying out a printout from the paper output tray of a compound machine, transmitting to the facsimile receiver of a remote place, or filing the data in a host computer in the storage connected to the compound machine etc. to the output destination change of arbitration by sending a suitable control code with data data from a host computer. Moreover, in such an environment, a user can also choose an output destination change according to the contents of data.

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EFFECT OF THE INVENTION

[Effect of the Invention] Since the output destination change is beforehand registered with a detailed setup according to this invention as mentioned above, at the time of data output, if an output destination change is chosen from while being registered, data will be outputted automatically, and the time and effort which carries out a detailed setup of an output destination change can be saved.

[0084] Moreover, while being able to use even for control within the information processing system which has two or more output units from this invention and MFT independent control and being able to use effectively two or more output units in a system, an output unit of the same kind can be used properly efficiently.

[0085] Moreover, if this invention is used, the output equipment of different media can be made to carry out the multiple address output of the same data. It can carry now once with an output that it is as to save at a filling system at hand and to share-size **** [, and], it can save the time and effort which outputs the same data to a phase hand numbers of [in all] times, and is effective. making it output to the printer of a location connected in networks, such as LAN,] [sending to the facsimile receiver of a remote place through a public line]

[0086] Moreover, since the output unit of an usable condition can be chosen automatically and can be outputted even when the phase hand who receives data has two or more output units, if this invention is used, the output unit of an efficiently different class can be used.

[0087] Moreover, if it is the environment which will be equipped with the facsimile connected to the printer to which the phase hand was connected through the network, and the public line if this invention is used, a printer will use it and the telephone line is busy to facsimile, automatic selection can be made without a break in of a user to a printer, the purpose of "sending data to a phase hand" can be attained easily, and it is more effective.

[0088] Moreover, this invention is a means to copy data to somewhere else.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, in the case of the conventional information processing system, a user needs to choose a suitable output destination change each time according to the data which it is going to output. Furthermore, a detailed setup suitable for the selected output destination change must be performed. For example, in a delivery means, a feed means, and facsimile transmission, it is necessary to set [in the case of a printout] up a different item for every function outputted to the condition of a permanent-file name a phase hand's telephone number, and in filing. and each output machine -- since the actuation performed whenever a setting item increases and a user outputs so that a core is highly efficient tends to become complicated -- an operation mistake -- a lifting -- easy -- it has become.

[0008] This invention is made in view of such a trouble, and it aims at providing with information processing system the power control device with which a user can set up an output destination change and its detail setup easily, its control approach, the medium which recorded the output-control program, and a list.

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MEANS

[Means for Solving the Problem] In order to attain the purpose which conquers the above-mentioned technical problem, the power control device by this invention has the following configurations. Namely, [0010] A registration means to be the power control device equipped with a selection means to choose a desired output means as an output destination change out of two or more output means, and to register one or more output means as an output destination change at the time of data printing, It is characterized by having an output destination change selection means to choose at least one desired output destination change from the output destination change registered into the registration means at the time of data output, and an output destination change setting means to set up so that data may be transmitted to the output destination change chosen by the output destination change selection means.

[0011] Furthermore, in order to attain the purpose which conquers the above-mentioned technical problem, the control approach of the power control device by this invention has the following configurations. Namely, [0012] The registration process which is the control approach of the power control device equipped with a selection means to choose a desired output means as an output destination change out of two or more output means, and registers one or more output means as an output destination change at the time of data printing, It is characterized by having the output destination change selection process which chooses at least one desired output destination change from the output destination change registered according to the registration process at the time of data output, and the output destination change setting process set up so that data may be transmitted to the output destination change chosen by the output destination change selection process.

[0013] Furthermore, in order to attain the purpose which conquers the above-mentioned technical problem, the storage by this invention has the following configurations. Namely, [0014] It is the computer-readable storage which stores the program which controls the power control device equipped with a selection means to choose a desired output means as an output destination change out of two or more output means at the time of data printing. The registration step into which said program registers one or more output means as an output destination change, It is characterized by having the output destination change selection step which chooses at least one desired output destination change from the output destination change registered at the registration step at the time of data output, and the output destination change setting step set up so that data may be transmitted to the output destination change chosen by the output destination change selection step.

[0015]

[Embodiment of the Invention]

The gestalt of operation of this invention is explained based on a drawing below [the 1st operation gestalt].

[0016] A laser beam printer can be mentioned as an example of the output unit which constitutes the information processing system concerning this invention, and has facsimile transmitter voice and a filing function. Drawing 1 is the sectional side elevation showing the internal structure of the laser beam printer applied to this operation gestalt.

[0017] The main configurations of the laser beam printer 1 contain the control panel 3 which has the switch section prepared in the top face of the body 2 of equipment, an LED display, etc., the printing body section 4 which performs predetermined printing actuation, and the print control unit 5 which analyzes alphabetic data and the control data which are inputted and controls printing actuation of the printing body section 4.

[0018] The sheet paper cassette from which the main configurations of the printing body section 4 became the medium tray which contains the predetermined record form (cut sheet) which is a record medium, and the stage of the number of arbitration, or the feed means 7 equipped with the both, The electrostatic drum 9 which imprints a toner image on the recording paper supplied through the conveyance roller 8 of the number of arbitration, The development counter 11 which contained the toner of a predetermined color to the electrostatic drum 9 as the optical system 10 which irradiates a laser beam, and a color material, and was arranged in the perimeter of the electrostatic drum 9, The fixing assembly 12 to which the toner image developed by the development counter 11 is fixed, and the delivery unit 14 which discharges the data printed by the detail paper to the equipment exterior through the delivery roller 13 are included.

[0019] Moreover, optical system 10 is equipped with the semiconductor laser 15 which injects the laser beam of predetermined wavelength, the laser driver 17 which drives semiconductor laser 15, the rotating polygon 18, and the reflecting mirror 19 which is made to reflect the laser beam which carries out ON light through a rotating polygon 18, and supplies this laser beam on the electrostatic drum 9.

[0020] The laser beam printer 1 which has such a configuration creates a character pattern, a form pattern, etc. based on these various data, and forms an image in a record form while it memorizes print data, form data, or macro instruction etc. which are supplied from the host computer 22 (drawing 2) as a power control device, such as a character code. That is, if a video signal

inputs into a laser driver 17 from a print control unit 5, a laser beam will be injected from semiconductor laser 15. Turning on and off of a laser beam changes according to a video signal. A laser beam is shaken at a longitudinal direction by the rotating polygon 18, scans the electrostatic drum 9 top, and makes electrostatic latent images, such as a character pattern, form on the electrostatic drum 9. A development counter 11 develops this electrostatic latent image, i.e., a toner is made to adhere and it makes a toner image form on the electrostatic drum 9. A toner image is imprinted by the recording paper to which paper was fed from the feed means 7, and a fixing assembly 12 is fixed to it. The recording paper is discharged by the discharge section 14 through the delivery roller 13 after that.

[0021] Drawing 2 is the block diagram showing the whole information-processing-system configuration concerning this invention, connection with the external storage 20 for printers is possible for the laser beam printer 1, and it connects the laser beam printer 1 to a host computer (power control device) 22 through the interface cable 21 which manages predetermined bidirection interface actuation. In addition, although the gestalt of this operation gestalt shows the case where the laser beam printer (compound machine) 1 and host KOMBYUTA 22 are connected through the interface cable 21, it is applicable similarly about the information processing system connected through predetermined communication networks, such as LAN (local area network).

[0022] The host computer 22 is equipped with the external storage 25, such as a flexible disk with which a PUTO program, a various application program, font data, the user file, the edit file, etc. were remembered to be the keyboard 23 for an operator to input the data of arbitration, and the display (CRT) 24 which performs the display of the inputted data etc., and a hard disk, and the information control unit 26.

[0023] The keyboard controller 27 which controls the input data the information control device 26 was instructed to be by key input data and the pointing device (un-illustrating) from a keyboard 23 (KBC), CRT controller (CRTC) 28 which controls CRT24, and the disk controller 29 which controls access with external storage 25 (DKC), The printer controller 30 which performs communications control processing with the laser beam printer 1 (PRTC), It has RAM31 which has a function as a work area etc., ROM32 which stores a predetermined printing control program etc., CPU34 which manages control of an information-processor 26 all affair, and the system bus 33 which connects each above-mentioned component.

[0024] ROM 32 has ROM35 for fonts which memorizes further the font data used at the time of processing of data, ROM36 for a program which stores a predetermined data-processing program and a printing control program, and ROM 37 for data which memorizes the various data used when performing the above-mentioned data processing, and CPU 34 performs data processing in which a graphic form, an image, an alphabetic character, the table (a spreadsheet is included), etc. were intermingled according to the above-mentioned data-processing program. At this time, RAM31 is used as a work area. CPU34 performs expansion (rasterize) processing of the outline font to the indicative-data field established in RAM31, and carries out the printout of the data possible [on CRT24] (WYSIWYG: What You See Is What You Get) and displayed on CRT24 as it is. Moreover, CPU34 opens various windows registered based on the command data directed with the pointing device etc., and performs various data processing.

[0025] The input section 38 into which, as for a power control device 5, output data are inputted from a host computer 22 on the other hand, The printing body section interface 39 which manages interface actuation between the printing body sections 4, The disk controller 40 which controls access with the external storage 20 for printers, and the external storage 49 for filing (DKC), RAM41 for printers which has an output-data expansion field, an environmental data storage field, NVRAM, etc., Predetermined data are equipped with ROM42 for printers memorized beforehand, the modem 48 linked to a telephone line, CPU44 for printers which manages control of the power control device 5 whole, and the system bus 43 which connects each component.

[0026] ROM42 for printers is equipped with ROM45 for fonts which memorizes the font data further used when generating the output data to the printing body section 4, ROM46 for a program which stores a predetermined control program, and ROM47 for data which memorizes the various data used with a host computer 22. CPU44 for printers outputs the picture signal as output data to the printing body section 4 connected through the printing body section interface 39. Moreover, through the input section 38, since the two-way communication of a host computer 22 and the laser beam printer 1 is possible, CPU34 can notify the print data of the laser beam printer 1 to a host computer 22. Furthermore, RAM41 for printers can extend memory space by being extended through an extension port (un-illustrating).

[0027] Form data, such as an emulation program which interprets font data and a different printer control language of a language system, are memorized by the external storage 20 for printers.

[0028] In addition, you may make it the configuration which can connect two or more external storage 20 for printers which stored an option font card and two or more emulation programs in addition to the built-in font, and the external storage 20 for these printers has NVRAM, and you may constitute so that the printer setting data from a control panel 3 may be memorized.

[0029] When facsimile is directed to the output destination change of the print data sent from a host computer 22, it connects with a phase hand's facsimile receiver through a telephone line, and a modem 48 is used in order to transmit the developed output data.

[0030] When filing is directed to the output destination change of the output data sent from a host computer 22, since output data are saved, the external storage 49 for filing is used.

[0031] Drawing 3 shows an example of the memory map 69 in the condition that the predetermined output-control program stored in ROM32 was loaded to RAM31, and activation of it was attained. A memory map 69 has the basic I/O program storage region 60, the OS storage region 61, the output setting control program storage region 62, the output destination change registration control program storage region 63, the associated data storage region 64, and a work area 65.

[0032] The output-control program and associated data which were recorded on media, such as a flexible disk, are once stored in

the hard disk (install), and when operating an output-control program, you may make it load to RAM31 from a hard disk, although this operation gestalt showed the example which the output-control program and associated data which were stored in ROM32 are loaded [example] to RAM31, and performs them.

[0033] Moreover, the media which record an output-control program may be CD-ROM, IC memory card, etc. in addition to a flexible disk.

[0034] Drawing 4 is an example of the memory map 59 at the time of using a flexible disk as an example of the external storage 25 connected to a host computer 22. The memory map 59 has the volume information storage region 50, the directory information **** field 51, the program storage area 52 that stores predetermined output-control programs (for example, an output setting control program, an output destination change registration control program, etc.), and the data storage area 53 which memorizes the associated data (for example, output destination change candidate information, default output setting information, the resource for a display (the object for printers, the object for facsimile transmission, for filing, etc.), etc.) used in the above-mentioned output-control program.

[0035] Drawing 5 shows the case where a flexible disk is used as an example of the external storage 25 connected to a host computer 22. By making the flexible disk drive which connected with the host computer 22 the flexible disk of the memory map illustrated to drawing 4 read, an output-control program is supplied to a host computer 22.

[0036] With this operation gestalt, the list of output destination changes is registered beforehand (following and output destination change registration control processing). When actually outputting data, a desired output destination change is chosen out of the output destination change list registered beforehand, and an output destination change is set up (following and output setting control processing).

[0037] Drawing 6 is the flow chart of output destination change registration control processing. This processing is performed after a program, data, etc. which are related by actuation of a keyboard 23 or a pointing device (un-illustrating) are loaded to RAM31.

[0038] First, ***** assistant information as shown in drawing 7 at step S10 is read from external storage 25. Drawing 7 illustrates the list 70 of the ***** assistant information memorized by the external storage 25 grade, and the available output means name (for example, a printer, facsimile transmission, filing) is memorized by each item 71 of a list 70 from the host computer 22 by the output-control program among the output means which the laser beam printer 1 supports.

[0039] Next, it progresses to step S11 and the output destination change candidate information read at step S10 is displayed on CRT24 of a host computer 22.

[0040] Drawing 8 shows an example of the GUI (Graphical User Interface) screen 80 displayed on CRT24 of a host computer 22 at the time of step S11. In the case of drawing 8, a user can choose now the carbon button (the printer carbon button 81, the facsimile transmitting carbon button 82, filing carbon button 83) in which the output means displayed on the screen is shown by actuation of a keyboard 23 or a pointing device (un-illustrating).

[0041] Next, it judges whether the output means was chosen from the output destination change candidate at step S12. If it is judged that the output means is chosen, it will progress to step S13 and will judge whether an output means is a printer. When an output means is not a printer, it progresses to step S14 and judges whether an output means is facsimile. If an output means is judged not to be facsimile at step S14, it will progress to step S15 and will judge whether an output means is filing. If an output means is judged not to be filing at step S15, it will return to step S12 and will wait for a user's selection.

[0042] When an output means is judged to be a printer at step S13, the default output setting information for printers is read from external storage 25 (step S16), and the setting screen for printers (un-illustrating) is displayed on CRT24 based on this (step S17). In case a printout is performed, it enables it to set a required feed means and a required delivery means, an output destination change, etc. as a detail on this setting screen. For example, if the printer 1 is equipped with the sorter, it will set up to which bottle paper is delivered. If the destination name is beforehand assigned to each bottle of a sorter, it comes to be able to perform bottle assignment of a sorter only in a destination name like a mail box at this time. For example, if the object for the "administration divisions" and the 2nd step of bottle are set up for the "procurement and supply divisions" for the 1st step of bottle, a delivery place can be concretely expressed as not "the 1st step" and the "2nd step" but the "administration division", and the "procurement and supply division", and a delivery place can be specified easily.

[0043] On the other hand, when an output means is judged to be facsimile at step S14, the default output setting information for facsimile transmission is read from external storage 25 (step S18), and the setting screen for facsimile transmission (un-illustrating) is displayed on CRT24 based on this (step S19). On this setting screen, in case facsimile transmission is performed, it is good to enable it to set the telephone number, an addresser name, etc. of a required transmission place as a detail. For example, if the list of the telephone number or output means setup is created for every name of a transmission place, facsimile transmission can be performed only by choosing a transmission place.

[0044] On the other hand, when an output means is judged to be filing at step S15, the default output setting information for filing is read from external storage 25 (step S20), and the setting screen for filing (un-illustrating) is displayed on CRT24 based on this (step S21). In case it files, it enables it to set a required permanent-file name, preservation format, etc. as a detail on this setting screen. For example, if the preservation place etc. is set up for every file name, the actuation at the time of updating data frequently and saving them will become easy. Moreover, if it is the environment which is delivering data using the filing function and the specific folder which the identifier of the partner who delivers data, and the section signature attached will be set up, data can be delivered easily.

[0045] In addition, a specific destination name (for example, logical names which output data, such as a previous section signature and a recipient name) may be set as arbitration as a name of an output means. If it does in this way, an output means

can be concealed, and data can be outputted to the output means set up beforehand only by choosing an output destination change. That is, since the data output to each output destination change is supposed by the destination name and can **** a detail setup in connection with an output means, data output can be performed, without being conscious of an output means. For example, if facsimile transmission to the "Osaka branch" and the Nagoya branch is set up for facsimile transmission to the Osaka branch with the "Nagoya branch", facsimile transmission of the data will be automatically carried out only by choosing the "Osaka branch" and the "Nagoya branch" at the Osaka branch or the Nagoya branch. If it does in this way, data can be outputted even if it does not take into consideration a printer, facsimile, and the output means of filing.

[0046] At step S22, if user actuation in each setting screen is supervised and a setup is completed, it will progress to step S23 and the output setting information on a configuration as shown in drawing 9 based on a setup of a user will be created. The common setting information storage region 91 which drawing 9 shows the list 90 of the output setting information created at step 23, and memorizes a common setting item in each output destination change, The setting information storage field 92 for printers which memorizes the setting item about a printer output, The setting information storage field 93 for facsimile transmission which memorizes the setting item about facsimile transmission, and the setting information storage field 94 for filing which memorizes the setting item about a filing output are included.

[0047] Next, it progresses to step S24 and the output setting information created at step S23 is saved at external storage 25.

[0048] Next, the output destination change and output means which were progressed and set to step S25, and output setting information are registered into the output destination change list 100 as shown in drawing 10. Drawing 10 shows the example of the output destination change list 100 used by the output-control program for outputting data, and has the destination name storage region 101 which memorizes the destination name of an output destination change, the output means storage region 102 which memorizes the classification of an output means, and the output setting information storage region 103 which memorizes the output setting information set as the output means. For example, at the 1st line of the list 100 of drawing 10, "output setting information #1" is memorized by the "administration division" at a destination name, and it is memorized by the output means at a "printer" and output setting information. The output setting information on drawing 10 is constituted like drawing 9.

[0049] At step S26, it checks whether there is any addition on the output destination change list 100. When there is an addition, when there are not return and an addition, this output destination change registration control processing is ended to step S12.

[0050] Next, the procedure at the time of actually outputting is explained. Drawing 11 shows the flow chart which shows an output procedure. A host computer 22 will transmit data to the output destination change which set up the output destination change of data according to the procedure mentioned later (step S112), and was set up through the printer (compound machine) 1, if an output destination change is chosen by the user (step S111) (step S113).

[0051] Drawing 12 is a flow chart which shows the procedure of the output setting control processing performed at step S112.

[0052] This processing is performed after loading a program, data, etc. which operate a keyboard 23 or a pointing device (un-illustrating), and are related before output initiation to RAM31.

[0053] At step S1, the registered output destination change list 100 as shown in drawing 10 is read from external storage 25. However, when output destination change registration control processing is not performed in advance, since the output destination change list 100 is not ****(ed), read-out will not be performed, but it will perform a setup as usual, or will create the output destination change list 100. Moreover, after carrying out a setup as usual, you may enable it to add the set-up conditions to the output destination change list 100.

[0054] It progresses to step S2 and an output setting screen is displayed on CRT24 based on the output destination change list read at step S1. Drawing 13 is drawing which enumerated the output destination change lists 100 which show an example of the GUI (Graphical User Interface) screen 120 of an output setup displayed on CRT24, and were registered at step S2.

[0055] The initial state of CRT24 displayed by step S2 is good to change into the condition that the predetermined item (for example, the first item) of the output destination change list 100 is chosen (step S3).

[0056] It progresses to step S4 and a user is informed that an output destination change is chosen from the output setting screen 120 displayed on CRT24 with a keyboard 23 or a pointing device (un-illustrating). For example, it is good to enable it to choose an output destination change by a user's clicking the output destination change carbon button 121 of arbitration with a pointing device (un-illustrating), or choosing the output destination change carbon button 121 by the keyboard 23 in the case of the GUI screen shown in drawing 13.

[0057] If selection of the output destination change by the user is checked at step S5, it progresses to step S6 and the item chosen from the output destination change list 100 is acquired. Then, the information on the selected output destination change is read from the output setting information saved in the output setting information storage region 103 (step S7), and the output setting information on a configuration of being shown in drawing 10 is initialized (step S8). Then, it progresses to step S113.

[0058] Thus, if the output destination change list is created beforehand, when outputting data, selection of an output destination change becomes easy.

[0059] In addition, this invention is not limited to the gestalt of operation mentioned above. Below, other operation gestalten are explained.

[0060] Although the gestalt of the [operation gestalt of ** 2nd] above-mentioned implementation has explained the gestalt by which a host computer controls, you may control except a host computer.

[0061] For example, the output-control program and associated data of a gestalt of the above-mentioned implementation are mounted in MFT, and the setting screen displayed on CRT24 with the gestalt of the above-mentioned implementation is displayed on the screen established in the operation panel of MFT, and it enables it to operate the setting screen displayed by the actuation key prepared at this operation panel. Moreover, the created output destination change list is saved at the nonvolatile

memory built in MFT. Thus, if constituted, an output means is controllable also by MFT.

[0062] Although it was going to output to each output means with [the 3rd operation gestalt] and the gestalt of the above-mentioned operation using the output means formed in single MFT, it is applicable also by the system which consists of two or more MFT connected through networks, such as LAN, or the output unit and host computer of a single function.

[0063] For example, the processing which detects each [of two or more output units] output means when it can use through a network from a host computer, and output capacity is prepared, it considers as the output destination change candidate information that the detection result was shown in drawing 7, and the output means detected on the ***** assistant selection screen displayed at step S11 of output destination change registration control processing of drawing 6 are enumerated. Then, a detail setup corresponding to the output capacity of the selected output means is performed, and it registers with an output destination change list.

[0064] Thus, with constituting so that two or more output units can be used integrative from a host computer, not only various functions MFT but two or more output units in a system can be used effectively.

[0065] Although an output destination change setup was created by specifying clearly the output means of the output unit connected into a system, each output means is concealed and you may make it specify only the classes (a printer, facsimile transmission, etc.) of output means with [the 4th operation gestalt] and the gestalt of the above-mentioned operation.

[0066] For example, in a system like the 3rd operation gestalt, when there are available printers 1-5, in output destination change registration control processing, it registers by making printers 1-5 into one group, and only let the group name be a "printer." When a "printer" is chosen by output setting control processing, the printer which is vacant out of printers 1-5 is chosen, and data output is performed.

[0067] Moreover, since it is the purpose that data are outputted to a phase hand's facsimile receiver when there are two or more facsimile sending sets used for transmission, there is no need of limiting a facsimile sending set. For example, in a system like the 3rd operation gestalt, when there are available facsimile sending sets 1-5, in output destination change registration control processing, it registers by making the facsimile sending sets 1-5 into one group, and only let the group name be "facsimile." When "facsimile" is chosen by output setting control processing, the facsimile sending set which is vacant out of the facsimile sending sets 1-5 is chosen, and data output is performed. Thus, it becomes possible to determine dynamically the output unit used for transmission.

[0068] While being able to use effectively two or more output units in a system with constituting as mentioned above, an output unit of the same kind can be used properly efficiently.

[0069] Although it set up for every output means and data were outputted with [the 5th operation gestalt] and the gestalt of the above-mentioned operation, two or more output means are collectively registered into one group, and you may enable it to output from all the output destination changes in a group in the case of data output. By one destination name, grouping of two or more output means is carried out, they are registered, and it enables it to choose by output setting control processing in which this was explained using drawing 12, in output destination change registration control processing in which it explained using drawing 6, at this time.

[0070] Or at the time of output setting control processing in which it explained using drawing 12, two or more output destination changes are chosen, and data may be made to be outputted from all the selected output means.

[0071] Thus, the same data can be made to output to coincidence from the output equipment of different media with constituting. That is, it is sufficient, and the thing made to output to the printer of a location connected in networks, such as LAN, of being as saving at a filling system at hand and share-izing **** [, and] can carry out now with an output once, and the time and effort which outputs the same data for every Media of a phase hand can be saved. [sending to the facsimile receiver of a remote place through a public line]

[0072] [-- operation gestalt [of ** a 6th]] -- although one kind of output means was registered into one output destination change, you may enable it to register the output means of a different class with the gestalt of the above-mentioned operation again

[0073] For example, the output means of a different class is registered as one group by output destination change registration control processing in which it explained using drawing 6. In case data are outputted, the output means included in the output destination change specified by output setting control processing in which it explained using drawing 12 is extracted from an output destination change list, and a vacant output means is used preferentially.

[0074] Thus, since the output unit of an usable condition can be chosen automatically and can be outputted with constituting when there are two or more output units, the output unit of a different class can be used efficiently.

[0075] For example, if it is an environment with the facsimile connected to the printer connected to the phase hand through the network, and the public line, a printer will use it and the telephone line is busy to facsimile, automatic selection can be made without a break in of a user to a printer, and the purpose of "sending data to a phase hand" can be attained easily.

[0076] A means to copy data to somewhere else although the printer ability supported by general MFT, the facsimile function, and the filing function were mentioned as an output means with [the 7th operation gestalt] and the gestalt of the above-mentioned operation

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the sectional side elevation showing the internal structure of the laser beam printer which constitutes the information processing system concerning this invention.

[Drawing 2] It is the block diagram showing the gestalt of 1 implementation of the information-processing-system configuration concerning this invention.

[Drawing 3] It is drawing showing an example of the memory map 69 in the condition that the output-control program was loaded to RAM31, and activation of it was attained.

[Drawing 4] It is drawing showing an example of the memory map 59 of external storage 25.

[Drawing 5] It is drawing showing the case where a flexible disk is used as external storage 25.

[Drawing 6] It is the flow chart of output destination change registration control processing.

[Drawing 7] It is drawing showing the example of a configuration of the list 70 of output destination change candidate information.

[Drawing 8] It is drawing showing an example of the screen which displayed output destination change candidate information by CRT24.

[Drawing 9] It is drawing showing the example of a configuration of the list 90 of output setting information.

[Drawing 10] It is drawing showing the example of a configuration of the output destination change list 100.

[Drawing 11] It is the flow chart of output-control processing.

[Drawing 12] It is the flow chart of output setting control processing.

[Drawing 13] It is drawing showing an example of the output setting screen displayed on CRT24.

[Description of Notations]

1 Laser Beam Printer (Output Unit)

3 Control Panel

20 External Storage for Printers

21 Bidirectional Interface Cable

22 Host Computer (Power Control Device)

23 Keyboard (Input Means)

24 CRT (Display Means)

25 External Storage

34 CPU

41 RAM for Printers

44 CPU for Printers

[Translation done.]

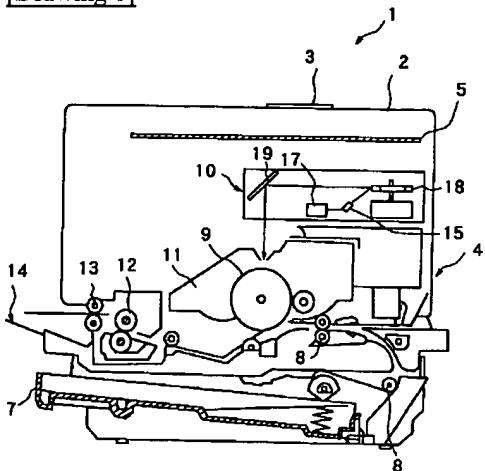
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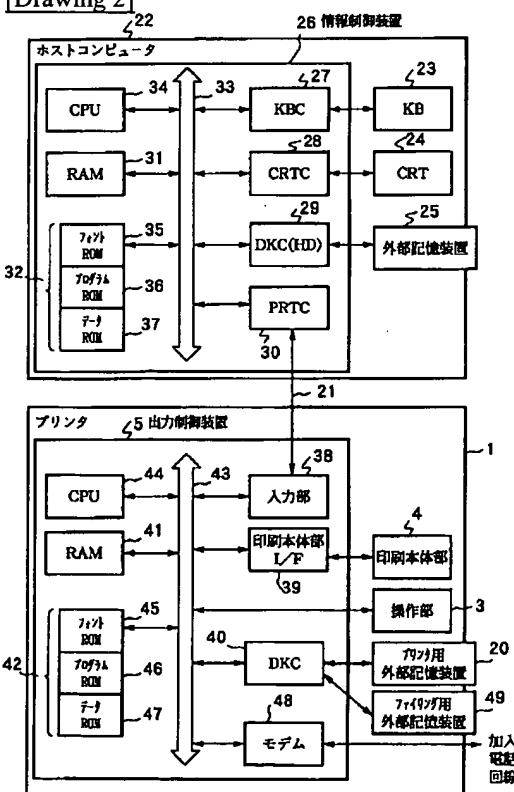
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DRAWINGS

[Drawing 1]



[Drawing 2]



[Drawing 3]

69

基本I/Oプログラム	60
OS	61
出力設定制御プログラム	62
出力先登録制御プログラム	63
迅速データ	64
ワークエリア	65

[Drawing 4]

59

ボリューム情報	50
ディレクトリ情報	51
:	
印刷設定制御プログラム実行ファイル	52
出力先登録制御プログラム実行ファイル	
:	
出力先候補情報	
プリント用データ印刷設定情報	53
ファクシミリ送信用データ印刷設定情報	
ファイリング用データ印刷設定情報	
:	
:	

[Drawing 7]

71	プリント	70
71	ファクシミリ送信	
71	ファイリング	
71	:	
71	:	

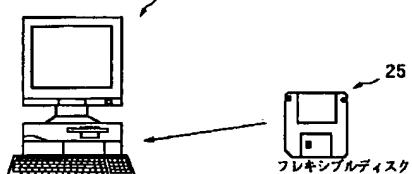
[Drawing 9]

90

91	共通設定情報
92	プリント用設定情報
93	ファクシミリ送信用設定情報
94	ファイリング用設定情報
:	

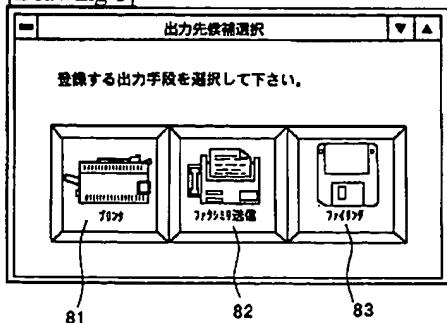
[Drawing 5]

22



[Drawing 8]

80

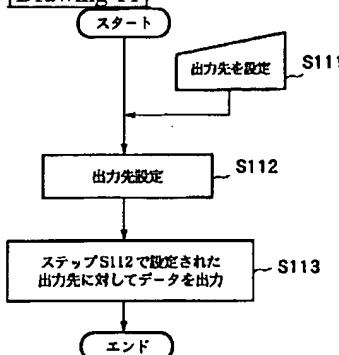


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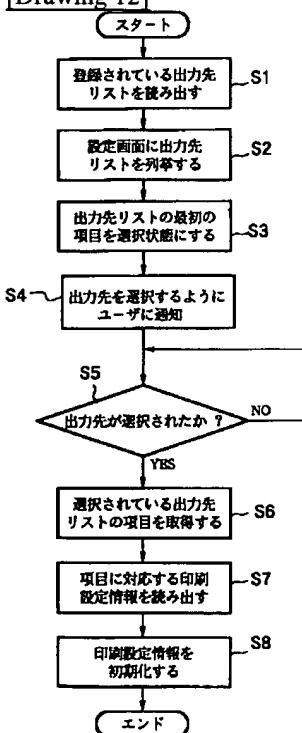
[Drawing 10]

101	102	103	100
管理課	プリンタ	出力設定情報 # 1	
資料課	プリンタ	出力設定情報 # 2	
管理課	ファクシミリ送信	出力設定情報 # 3	
資料課	ファイリング	出力設定情報 # 4	
:	:	:	

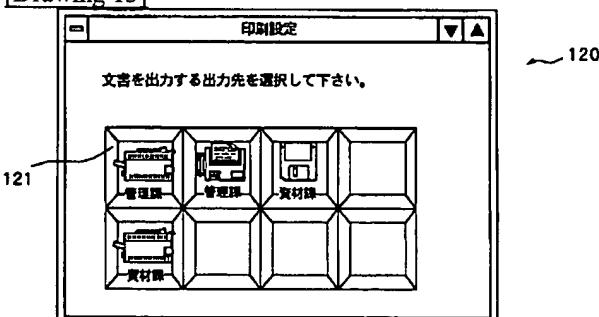
[Drawing 11]



[Drawing 12]



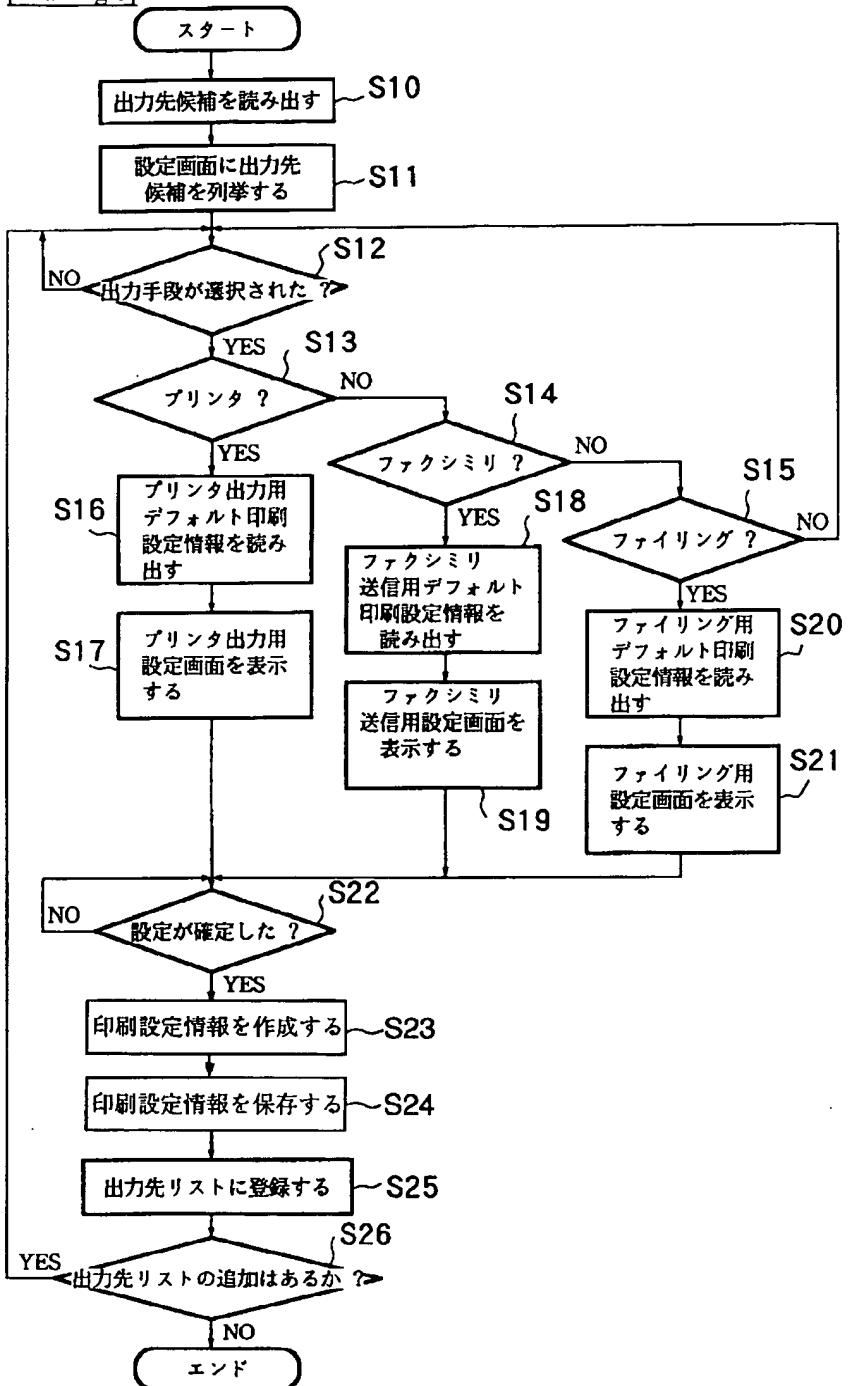
[Drawing 13]



120

23

[Drawing 6]



[Translation done.]